

Evaluation of Cyanoacrylate no sting Liquid Skin Protectant (CLSP)* as an effective skin protectant for moisture damage and peristomal lesions

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INTRODUCTION

Moisture lesions and peristomal lesions are the consequences of unmanaged, prolonged exposure to urine and/or feces on the skin, which can result in tissue breakdown, increased risks of infection, and increased risk of pressure damage. These lesions are also known to be quite painful, adversely affecting an individual's physical and psychological well being. Alongside programs for continence management, skin protectants/barrier products are also utilized to reduce the damaging exposure of contaminants (Bianchi, 2012) on vulnerable skin. This poster presents the clinical evaluation of a novel class of skin protection products, known as cyanoacrylates.

The product described in this study is liquid skin protectant. The protectant is formulated to be a non-stinging, cyanoacrylate based monomer that polymerizes rapidly (usually less than minute) when in contact with moisture on the skin surface forming a robust protective layer. The polymerization of the cyanoacrylate also results in its chemically formed bond to the skin surface, and integrating with the epidermis, thus protecting the skin strongly. Such bonding is qualitatively different than other types of film forming or cream type barriers, which can be described more as protection that is painted on with no chemical bonding, as such, to the underlying skin.

METHOD

Two clinical units were chosen to evaluate liquid skin protectant, because these areas were identified as areas that experienced high incidences of moisture associated damage or peristomal irritation with sometime frustrating results from the usage of the usual film formers/barrier creams. The two different clinical units chosen to study moisture lesion in incontinent subjects were the Cardiac Intensive Therapy and High Dependency Units. To study peristomal lesions, patients under the care of the Urology Stoma Nurse Specialist were chosen. One applicator is designed to provide skin coverage of 10x10cm. The product may provide protection up to three days, as stated on the label, and has a purple color to assist visualization. The product sloughs or sheds off skin when the top keratinized layer of skin "turns over" or is shed in a normal physiological process. The product may be reapplied as needed, with the colored nature of the polymer film created on the skin providing guidance with respect to when reapplication is needed. The product may be applied over previous layers. Only a thin film of product suffices to provide protection per the label.

Prior to the study, all staff in clinical areas and the nurse specialists undertook training sessions in the correct application and appropriate use of the product. Following commencement of the evaluation at regular intervals all patients' skin areas being studied were assessed either by the Tissue Viability Nurse, the Urology Stoma Nurse Specialist or a member of the clinical evaluation team, who also completed evaluation forms. Evaluation forms commonly used by the Health Board to study the skin condition were used with slight amendments made for the specific purpose of this study.

Patients were selected for inclusion on the basis of clinical assessments and indications for the use of liquid skin protectant. Regular skin checks and continence care with the aid of a SKIN Bundle was performed in parallel with Marathon application as needed. Clinicians measured the following criteria:

Ease of use; Period of protection; Wear off time; Whether color allows observation or not; Prevents epidermal stripping; Dermatological irritation; Pain upon application and Overall level of protection. Evaluators were also asked to rate how the product compared to existing skin protectants/barriers currently in wide use in the units.

SUMMARY OF RESULTS

In total 14 evaluation forms were completed.

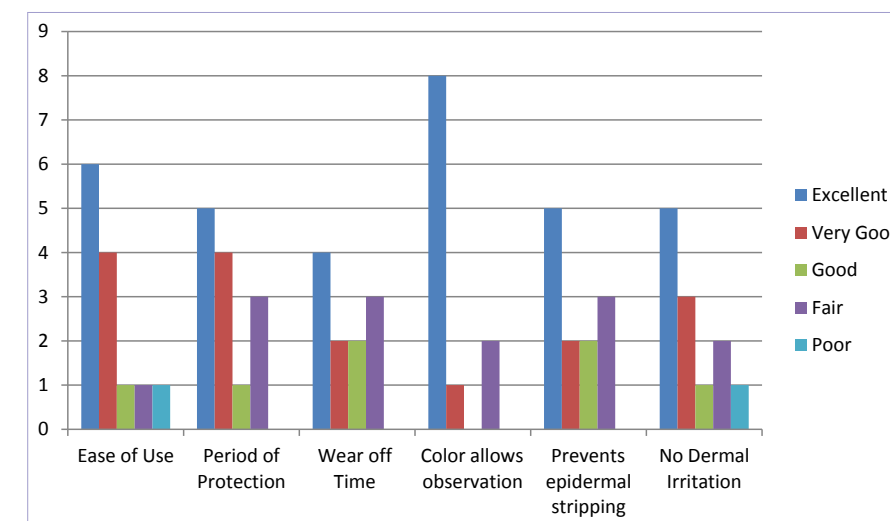
73% of the users commented that the skin protectant was better than or equivalent to the products used as standard practice.

DISCUSSION

The objective of the evaluation was to obtain clinician feedback with regards to the ease of use and clinical efficacy of the skin protectant. From the clinical situations that were evaluated, the feedback was consistently positive with all stoma patients. On each criteria measured the product was rated as 'Excellent' and as providing 'Better protection than current product. Feedback from Cardiac ITU/HDU with respect to skin protection in incontinent patients was mixed. This generally was the case with each of the criteria measured in this set of patients. It was felt that the mixed feedback may have been due to the inconsistency of application between different members of staff. Even though all staff were trained not to apply the product each time a patient was washed, because over application of the product is not necessarily optimal, and application at each wash may lead to an undesirable "build-up" of the product which could lead to discomfort, it appeared that over application was happening on some occasions. Clearly the proper use of the product will require better in depth training than was provided to initiate the study.

CONCLUSION

On the basis of the results and feedback collected during this evaluation, a clear outcome was that patients with peristomal skin damage positively benefited from the use of the skin protectant. With respect to incontinent patients suffering from moisture damage, effective protection of skin at risk of moisture/incontinence damage was achieved in a majority of patients was achieved, but optimal usage may still be quite dependent on the size of the affected area because the vial is most optimal in smaller areas. In light of the results the authors would definitely suggest the use of the product as a peristomal protectant with high confidence. In the context of moisture lesions due to incontinence a further study on a large scale basis is warranted, but until this is completed its use is best considered in those cases where traditional products in wide usage fail to provide a sufficient barrier.



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